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REMARKS

Claims 1, 2 and 3 are presently pending in the application.

Claims 1 and 3 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Stern et al. '557 while claim 2 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Stern et al. '557 in further view of Spriester et al. '703 and under 35 U.S.C. § 112, second paragraph, as indefinite for the reasons noted in the official action.

The Applicant acknowledges and respectfully traverses the raised anticipatory rejection in view of the following remarks.

The Applicant has responded to the official action by amendment of claims 1, 2 and 3 wherein claims 1, 2 and 3 have been canceled, without prejudice or admission with regard to the subject matter therein, and the addition of claims 4, 5, 6 and 7, which correspond to and replace claims 1, 2 and 3. New claims 4, 5, 6 and 7 do not add any new subject matter, and do not extend or alter the scope of the claimed subject matter.

Considering the rejection of claim 2, now new claim 5, under 35 U.S.C. § 112, the rejected claim is amended by the above claim amendments and so that the presently pending claims are now believed to particularly point out and distinctly claim the subject matter regarded as the invention, thereby overcoming all of the raised § 112, second paragraph, rejections. The claim amendments submitted in response to the rejection of claim 2 under 35 U.S.C. § 112 are directed solely at overcoming the raised indefiniteness rejection and are not directed at distinguishing the present invention from the art of record in this case.

Next considering the rejections of claims 1 and 3 under 35 U.S.C. § 102 over Stern et al. '557 and of claim 2 under 35 U.S.C. § 103 over Stern et al. '557 in further view of Spriester et al. '703, it must first be noted that the Applicant has amended claims 1, 2 and 3, now claims 4, 5, 6 and 7, to more clearly and explicitly recite the present invention.

In brief, and as recited in new claim 4, the present invention is directed to a cable broadcasting system that includes a central equipment having broadcasting equipment for transmitting broadcast signals on a transmission line and a controller for transmitting command

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signals controlling distribution of the broadcast signals to broadcast signal receiving terminals. The broadcast and command signals are transmitted to receiving districts wherein each receiving district includes tap devices connected from the transmission line for distributing the broadcast signals to terminals, and a district power supply connected from a power source and providing a power signal through the transmission line to the tap devices of the receiving district.

Each tap device includes the circuits necessary to switchably and controllably control the distribution of the broadcast signals to the terminals, including switchable tap paths for distributing the broadcast signals to the terminals, control relays for controlling connections between the tap paths and the terminals, and a tap control responsive to the command signals for controlling the control relays. Each tap device also includes a tap device power supply connected from the power signal on the transmission line and providing power to the tap device.

An essential aspect of the invention which must be emphasized at this point, and which is recited in claim 4 and was recited in original claim 1, is that the receiving terminals are organized into receiving districts containing one or more tap devices, each having taps for connection of the receiving terminals to the broadcast signals, and that each receiving district contains a single district power supply for providing a power signal to all of the tap devices in the district through the transmission line. Stated more briefly, each district contains a number of tap devices and each district has a single district power supply providing power to the tap devices of the district.

This aspect of a cable broadcasting system of the present invention is further recited in claim 4, and was recited in original claim 1, in the recitations that the center equipment includes broadcasting equipment for transmitting broadcast signals on a transmission line and a controller for transmitting command signals on the transmission line to control the tap devices. Stated another way, claim 4 and original claim 1 do and did not recite a power supply for the center equipment. As described in the specification and as shown in the drawings, the center equipment does contain a local power supply for supplying power to the center equipment, and only to the center equipment. That is, the center equipment power supply does not transmit

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power to any of the districts or the tap devices therein and, as such, is not in itself pertinent to the present invention, so that the center equipment power supply is not recited in the previous or present claims.

It is described in the present application that the use of distributed power supplies according to the present invention, that is, the use of one district power supply in each district providing power to the tap devices of the district, is to reduce the cost and size associated with a single, central power supply, as well as the dependency of the entire system on a single power supply, by using a number of smaller, more efficient district power supplies.

As described in the application, this aspect of the cable system of the present invention leads to a further aspect of a cable broadcasting system according to the present invention. Specifically, and in accordance with the principle of using smaller, more efficient distributed power supplies to power each district individually, it is desirable that each district power supply have no more capacity than is necessary for a reasonable number of tap device switching operations at a given time. That is, each switching operation on a tap device requires additional power from the district power supply, and each district power supply is sized to some selected average and maximum power level, which relates to a corresponding maximum number of concurrent tap device switching operations that can be supported at a given time.

It is recognized, however, that a center equipment may require a relatively large number of concurrent or closely consecutive tap device switching operations, and that a number of these operations may be concentrated in a given district. In such instances, there is a risk of exceeding the number of concurrent or closely consecutive switching operations that the district power supply can support, and potential failure of or errors in the system.

This consideration thereby leads to an essential aspect of the present invention, that of controlling the number and occurrence of command signals directed to the tap devices in each district so that the number of concurrent or consecutive switching operations in a district do not exceed a limit. More specifically, and as recited in claim 4 and as recited in original claim 1, the center equipment controller that generates and transmits command signals to the tap

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devices will generate a sequence of command signals to the control relays of the tap devices of each district so that successive command signals are transmitted to different receiving districts. Stated another way, center equipment controller will not transmit two consecutive command signals to the same district, thereby automatically limiting the number of concurrent or too closely consecutive tap device switching operations that can be commanded in any given district.

This aspect of the present invention is further delineated in new claim 5, which corresponds with original claim 2, by the addition restriction on command signals transmitted by the center equipment controller that the interval between transmission of command signal to a given district will be at least that required for a tap device in the district to complete execution of a preceding command signal.

Next considering the rejection of claim 1, now claim 4, under 35 U.S.C. § 102 over Stern et al. '557, the Applicant respectfully disagrees with the Examiner's reading and interpretation of the teachings of Stern et al. '557 for the following reasons.

First, the Specification and drawings of Stern et al. '557 explicitly and clearly describe that the broadcast signals, the command signals for controlling the addressable taps and a power signal for providing power to each of the addressable taps is transmitted through the transmission line to the addressable taps. Each addressable tap has a power supply for receiving the power signal transmitted from the central facility and providing power to the addressable tap in which it resides. For this reason and as clearly described in Stern et al. '557, the wired broadcasting system of Stern et al. '557 does not divide the addressable taps into receiving districts and does not provide a power supply for each receiving district. Instead, and in basic contrast from the present invention, in the Stern et al. '557 system all power is transmitted from the central facility and the power supplies in the addressable taps function only to receive the power transmitted from the central facility and to use the received power to power the addressable tap.

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According to the present invention as recited in the claims, therefore, the Stern et al. '557 does not and cannot have "districts" because a district as defined in the present Application and the claims thereof as a unit or division of the system having its own power supply and a plurality of tap devices served by that power supply. In contrast, and as discussed above, Stern et al. '557 actually has only a single, central power supply. Even if the power converter in each of the Stern et al. '557 addressable taps is interpreted as an independent power supply, this would merely mean that a "district" would contain only a single addressable tap whereas, according to the present invention, a district may contain a plurality of tap devices. As a consequence, therefore, the Stern et al. '557 system does not and cannot have "districts" and the teachings of Stern et al. '557 do not and cannot describe or even suggest the organization of a cable broadcasting system into districts.

In addition, and in fundamental and critical distinction from the broadcasting system of the present invention, Stern et al. '557 does not address or even consider the effects of power consumption due to concurrent or closely consecutive addressable tap switching operations due to concurrent or closely consecutive command signals transmitted from the central facility. As discussed above, Stern et al. '557 actually contains only a single, central power supply and the power supply in each addressable tap is essentially only a power converter that receives all of the power required for the addressable tap from the single, central power supply and provides power only to the single addressable tap in which it resides. As such and in consequence, in the Stern et al. '557 system any issues of power supply adequacy arising from the number of concurrent or consecutive command signals directing tap switching operations are immaterial and, as such, Stern et al. '557 does not ever address such issues.

As such, and as discussed above, therefore, Stern et al. '557 does not have, teach or suggest a division of the system into districts, each district having one or more tap devices and a single district power supply that is independent from the center equipment. For this reason, the system of Stern et al. '557 cannot and does not teach or even suggest that command

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signals should be issued on a per district basis, so that consecutive or concurrent command signals are not issued to the same district.

This fundamental distinction of the present invention over the teachings and suggestions of Stern et al. '557 are explicitly recited in claim 4 in the recitation that "in a sequence of command signals transmitted by the transmission equipment to control the control relays of a plurality of tap paths, successive command signals are transmitted to different receiving districts."

It will be further noted that this fundamental distinction of the present invention over the teachings of Stern et al. '557 is further delineated, as discussed above, in the recitation of claim 5 that: "the center equipment controller will transmit a command signal to a tap device in a receiving district only after an operating time required for a tap device in the receiving district to complete execution of a preceding command signal has elapsed."

That is, claim 5 addresses the same issues and inventive aspects, but with specific regard to allowing a commanding switching operation of a tap device in a given district to complete before a next command signal is addressed to that district, thereby avoiding overlapping switching operations.

It is, therefore, the belief and position of the Applicant that claim 4, previously claim 1, is fully and patentably distinguished over the teachings and suggestions of Stern et al. '557 under both 35 U.S.C. § 102 and 35 U.S.C. § 103 for the above discussed reasons. The Applicant, therefore, respectfully requests that the Examiner reconsider and withdraw all rejections of the claims under 35 U.S.C. § 102 over Stern et al. '557, and the allowance of claim 4.

Next considering the rejection of claim 3 under 35 U.S.C. § 102 over Stern et al. '557, it must be noted that claim 3 has been amended herein above by being rewritten into new claims 6 and 7, which replaces original claim 3.

New claims 6 and 7 are dependent from new claim 4, and thereby incorporate all recitations and limitations of new claim 4 by virtue of dependency therefrom. As discussed

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above, it is the belief and position that new claim 4 is patentably distinguished over and from the teachings and suggestions of Stern et al. '557 under both 35 U.S.C. § 102 and 35 U.S.C. § 103, and it is thereby the belief and position of the Applicant that new claims 6 and 7 are likewise and for the same reasons patentably distinguished over the from the teachings and suggestions of Stern et al. '557 under 35 U.S.C. § 102 and 35 U.S.C. § 103. The Applicant, therefore, respectfully requests that the Examiner reconsider and withdraw all rejections of the claims under 35 U.S.C. § 102 over Stern et al. '557, and the allowance of the claims, including claims 6 and 7.

Finally, claim 2 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Stern et al. '557 in further view of Spriester et al. '703. As discussed herein above, original claim 2 has been rewritten as the replaced by new claim 3, which is dependent from new claim 4 and which thereby incorporates all recitations and limitations of new claim 4.

It is the belief and position of the Applicant that claim 4, and thus claim 5 as incorporating all recitations and limitations of claim 4, is thereby patentably distinguished over and from the teachings and suggestions of Stern et al. '557 under 35 U.S.C. § 102 and 35 U.S.C. § 103 for the reasons discussed above. It is further the belief and position of the Applicant that claim 4 and claim 5 are patentably distinguished over and from the teachings and suggestions of Spriester et al. '703 and of Stern et al. '557 in further view of Spriester et al. '703 under 35 U.S.C. § 102 and 35 U.S.C. § 103 for the reasons discussed above with regard to Stern et al. '557.

The Applicant, therefore, respectfully requests that the Examiner reconsider and withdraw all rejections of the claims under 35 U.S.C. § 102 or 35 U.S.C. § 103 over Stern et al. '557, over Spriester et al. '703 and over Stern et al. '557 in further view of Spriester et al. '703, and the allowance of the claims, including claim 5.

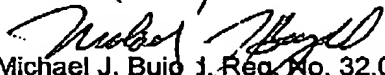
In view of the foregoing, it is respectfully submitted that the raised rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

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The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until all wable subject matter is indicated for this case.


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Respectfully submitted,


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